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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,893	11/28/2001	Harunobu Kusumoto	Q67476	8024
7590	10/03/2003		EXAMINER	
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, N.W. Washington, DC 20037-3213			PASSANITI, SEBASTIANO	
			ART UNIT	PAPER NUMBER
			3711	
			DATE MAILED: 10/03/2003	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/994,893	KUSUMOTO, HARUNOBU	
	Examiner Sebastiano Passaniti	Art Unit 3711	
<i>-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --</i>			
<b>Period for Reply</b>			
<b>A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.</b>			
<ul style="list-style-type: none"> <li>- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.</li> <li>- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.</li> <li>- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.</li> <li>- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).</li> <li>- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).</li> </ul>			
<b>Status</b>			
1) <input checked="" type="checkbox"/> Responsive to communication(s) filed on <u>18 July 2003</u> .			
2a) <input type="checkbox"/> This action is <b>FINAL</b> .		2b) <input checked="" type="checkbox"/> This action is non-final.	
3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.			
<b>Disposition of Claims</b>			
4) <input checked="" type="checkbox"/> Claim(s) <u>1-19</u> is/are pending in the application.			
4a) Of the above claim(s) <u>13-15</u> is/are withdrawn from consideration.			
5) <input type="checkbox"/> Claim(s) _____ is/are allowed.			
6) <input checked="" type="checkbox"/> Claim(s) <u>1-12 and 16-19</u> is/are rejected.			
7) <input type="checkbox"/> Claim(s) _____ is/are objected to.			
8) <input type="checkbox"/> Claim(s) _____ are subject to restriction and/or election requirement.			
<b>Application Papers</b>			
9) <input type="checkbox"/> The specification is objected to by the Examiner.			
10) <input checked="" type="checkbox"/> The drawing(s) filed on <u>29 January 2002</u> is/are: a) <input checked="" type="checkbox"/> accepted or b) <input type="checkbox"/> objected to by the Examiner.			
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).			
11) <input type="checkbox"/> The proposed drawing correction filed on _____ is: a) <input type="checkbox"/> approved b) <input type="checkbox"/> disapproved by the Examiner.			
If approved, corrected drawings are required in reply to this Office action.			
12) <input type="checkbox"/> The oath or declaration is objected to by the Examiner.			
<b>Priority under 35 U.S.C. §§ 119 and 120</b>			
13) <input checked="" type="checkbox"/> Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).			
a) <input checked="" type="checkbox"/> All b) <input type="checkbox"/> Some * c) <input type="checkbox"/> None of:			
1. <input checked="" type="checkbox"/> Certified copies of the priority documents have been received.			
2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____.			
3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).			
* See the attached detailed Office action for a list of the certified copies not received.			
14) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).			
a) <input type="checkbox"/> The translation of the foreign language provisional application has been received.			
15) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.			
<b>Attachment(s)</b>			
1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)		4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____.	
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)		5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)	
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.		6) <input type="checkbox"/> Other: _____.	

## DETAILED ACTION

This Office action is responsive to communication received 07/18/2003 –  
Election.

Claims 1-19 remain pending.

Applicant's election without traverse of Group I (claims 1-12 and 16-19) in Paper No. 5 is acknowledged.

Claims 13-15 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5.

Following is an action on the MERITS:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noble in view of Beach, Thorne and Sasamoto. Noble shows an arrangement in which the rear of the striking face is provided with a thin-walled portion as well as a thick-walled portion. The striking face is in the form of a plate and is made of metal. Noble differs from the claimed invention in that Noble does not disclose a rolling procedure for forming the thick-walled and thin-walled portions, nor does Noble detail that the face is formed by forging or machining, with either process combined with

a rolling process. Last, Noble does not discuss that the rolling direction is oriented with the short dimension of the club or that the crystal grains maintain a specific orientation within the thin-walled portion. Beach shows it to be old in the art to fashion a club head face from either forging or rolling or a combination thereof. See col. 4, lines 16-18 in Beach. Thorne acknowledges that forging or machining may be used to fabricate the diverse parts of the club head. See col. 2, lines 60-64 in Thorne. These processes are well-known to the skilled artisan in the golf art and the selection of the appropriate manufacturing technique in view of material and cost considerations would have been obvious at the time of the invention. Sasamoto takes advantage of a rolling procedure to fabricate the striking face plate and orients the longitudinal direction of the crystal grains within the material of the striking face plate such that the grains run parallel to the vertical, or short, dimension of the head. With this arrangement, Sasamoto minimizes the amount of cracking to which the face plate would otherwise be susceptible to with the crystal grains oriented in a non-parallel fashion with respect to the vertical dimension of the striking plate. Moreover, Sasamoto recognizes that the formation of the striking plate via a rolling process in which the crystal grains are oriented as detailed above goes far to produce a desirable weight reduction of the head, enables thinning of the club head shell while maintaining the strength and integrity of the shell and helps to improve the directional stability of a struck ball. See col. 9, lines 1-65 in Sasamoto. In view of the patent to Sasamoto, it would have been obvious to modify the device in the cited art reference to Noble by providing for a specific grain orientation of the material that makes-up the striking face, the motivation being to reduce the likelihood that the

striking face material will crack under normal use. Specific to claim 2, Figures 9 and 10 in Noble show a smooth transition between the thin-walled and thick-walled portions. Specific to claim 3, the transition from thick-walled to thin-walled portions is clearly gentler in a heel-to-toe direction, rather than a top-to-sole direction, as evidenced by claim 10, since the length dimension is greater than the height or vertical dimension of the striking plate. Specific to claim 4, the thickness of the thick-walled portion is at least 10% greater than the thickness of the thin-walled portion. Specific to claim 5, the center of the striking plate is thick-walled while the peripheral region is thin-walled. Specific to claims 6 and 10-12, note the comments with respect to the Sasamoto reference, *supra*. As to claim 7, note that Thorne obviates the use of a machining process, as discussed above. As to claim 8, see Figures 9 and 10 in Noble, which clearly show that the peripheral edge is thinned. As to claim 9, Thorne obviates the use of a forging operation to fabricate the head. Specific to claims 16-19, the claimed thickness of the fringe surface is not deemed critical, as the skilled artisan, being familiar with the various manufacturing techniques available at the time of the invention including forging, machining and rolling, would have found it obvious to dimension the fringe portion to a sufficient thickness so that a welding operation could have been performed without jeopardizing the structural integrity of the striking plate connection at its juncture with the front portion of the club head body.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "plate-like" used throughout the claims renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by " -like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d). Why not simply say --plate- -.

Specific to claim 8, this claim is grammatically incoherent. What is "the thinner" ? Is the thin-walled portion thinner? If so, what is the thin-walled portion being compared to?

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kosmatka shows a face plate having a variable thickness. Parente shows a hollow club head formed of forged aluminum.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sebastiano Passaniti whose telephone number is 703-308-1006. The examiner can normally be reached on Mon-Fri (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Sewell can be reached on 703-308-2126. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.



Sebastiano Passaniti  
Primary Examiner  
Art Unit 3711

S.Pasaniti/sp  
September 29, 2003